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DATAMATION®

FOR MANAGERS OF INFORMATION TECHNOLOGY WORLDWIDE

SYSTEMS STRATEGIES FOR THE 90'S

The Application Decade Begins

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DATAMATION

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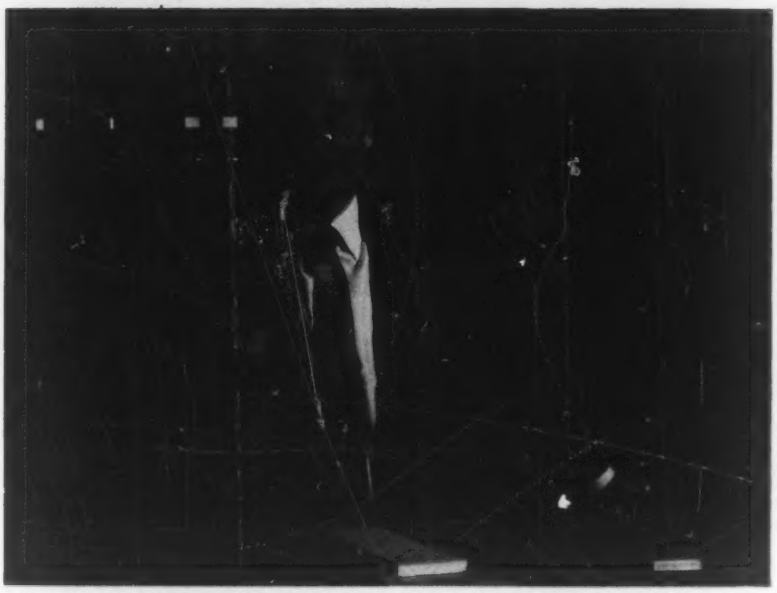
COVER STORY



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Cover design by Tim Girvin Design.

Systems & Strategies for the 1990s debuts with this issue as we begin The Application Decade. Our year-long series on the information technologies and strategies that will make a difference in the 1990s endeavors to examine in depth all major components of computing. Open systems, networking and distributed database systems will merit our special attention, as will other aspects of distributed computing.

INSIGHTS ON DISTRIBUTED COMPUTING

By the end of the '90s, most corporations will have their PCs hooked to corporatewide networks.

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A New Database For New Times 35

BY WON KIM A host of new distributed applications using CAD, CASE, expert systems and other technologies may require a new generation of database software—oriented around objects, not relations.

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BY JOHN McMULLEN The popularity of Microsoft Windows for DOS-based personal computers has become irresistible, even as IBM and Microsoft emphasize the virtues of OS/2 and Presentation Manager.

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BY MARTIN HEALEY The future is a world of challenge and promise for workstation users, as developments in chip technology, open systems, CASE and object-oriented programming open the door to competition from PCs and worldwide suppliers.

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LETTERS

The Software Doctor

Hooray! Effective project management ["Project Planning Made Easy"] (Oct. 15, 1989, p. 49) in IS is finally coming out of the closet. A few years back, I suggested to a major manufacturing systems software house catering to aerospace and defense that they use their MRP-II package to manage their own software development projects. Everyone laughed, until one project manager in the back of the room said he had been doing exactly that for years.

Software development project management is more than just planning and scheduling. Resources contention and priority conflicts need visibility so corrective action can be taken to meet delivery dates. Capacity planning highlights overloaded (oops) work centers. Master scheduling keeps all module and project due dates realistic. Because each deliverable module can be given a part number and collected into bills of material, revision and configuration management can be maintained. Tracking all projects' progress not only keeps the due dates (oops again) valid but also is an effective tool for cost and schedule performance measurement.

Why scrunch project management packages to mold them into the alien IS environment? MRP-II software is designed for this type of project and process definition, planning, execution and costing. It comes in all sizes and flavors from the PC to the mainframe platforms. All it takes is an understanding of the MRP-II concept and a little ingenuity in creating bills of material, routings and work centers. I know because I did it.

You IS folk have been helping those of us in manufacturing manage our resources for years. Physician, heal thyself.

Donald N. Frank
Plossl and Frank
Florham Park, N.J.

Another Dose of Noise Cures

The article in the Aug. 1, 1989 issue on noise problems ["Cures for Noise Problems," p. 47] is useful, but does not address several significant issues.

The first is that often only a small segment of a system may be really critical for power quality. Providing a UPS for 100kVa of computer power when maintenance of 1kVa will serve until emergency power can be activated can be both inefficient and not cost-effective.

A UPS can easily be a culprit rather than a lifesaver. Rectifiers, particularly SR types, generate extensive harmonic output that can easily interfere with system operations. The fact that a battery may be "noise free" does not prevent reflection of harmonics onto a power source. In fact, fluorescent lights also generate harmonics: only incandescent lamps and electric heaters are not major culprits. All electronic systems normally have rectifiers that can, and do, introduce noise. Assuring harmonic free sources and loads can be critical to computing and other systems.

Use of a rotating converter or motor generator for AC/DC or AC/AC conversion isn't the highest tech, but it has a great deal to offer. The main converter can output 400Hz or higher frequency power. And there will be no reflected harmonics back into the main power source, reducing problems with PCs, fluorescent lights, etc. Multiple electronic conversions from AC to DC to AC at another frequency to DC again only complicate the problem.

At points of utilization, rotary converters for AC/DC conversion can have a much lower noise level than a rectifier system with an associated DC/AC/DC conversion system. Because of the multiple-segment commutator (or its electronic equivalent) switching occurs at very small voltage differences, with an absence of instantaneous interruption of current and freedom from the resulting "inductive-kick" effects, which can provide a significantly better noise field situation.

Battery backup is still possible, but it will be needed as an interim source while switching to a local emergency diesel or other generator, which can operate at high frequency instead of 60Hz. The battery can be kept charged from the field-excitation unit used to stabilize the converter output voltage. Diodes can provide the required emergency switching.

The issue is to localize and minimize nonlinear loads of all kinds while at the same time assuring UPS service to critical elements. Only critical elements that are both voltage- and interruption-sensitive should be carried on a UPS system in any case. Any parts of a system that can have operation interrupted for a short period without damage to the system or its function should be allowed to die gracefully, at least until an emergency generator is on line.

Keats A. Pullen Jr., P.E.
Kingsville, Md.

Correction

The Tandem Computer Inc. system referred to in the November 15, 1989 Look Ahead is the LXN 32 bit multiuser computer.

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Why Business Analysts Are Indispensable to IS

Individuals who know which information technology tools to use to match the products and services of their organization with the needs of their customers are fast becoming competitive necessities.

BY TOM McCUSKER

Their titles vary company by company, but their function essentially is the same: to evaluate a company's information systems strategy within the context of its business needs and goals.

They are called business analysts, strategic system planners, information systems architects or a host of other names that come to mind. The position, relatively new, is being created in more and more organizations "in recognition of how important information systems are to the long-term health of our business," in the words of one analyst, Michael J. Polosky. A 25-year veteran of Pacific Bell Co., a unit of Pacific Telesis Group, Polosky, 46, is the Bell operating company's assistant vice president for Systems Planning and Technical Services in San Ramon, Calif., near San Francisco.

He has held the position three years. Before this, Polosky, who graduated from the University of Santa Clara with an electrical engineering degree, says he had held 20 different positions with the company. His former positions were equally divided between technical and operational functions.

Currently, Polosky reports to Jack Hancock, the company's vice president for systems technology, who in turn reports to Marty Kaplan, executive vice president for customer services. Polosky also works closely with PacBell 's corporate planning, network and marketing groups.

Polosky is responsible for all planning within the company's systems areas. Systems include mainframes from Amdahl Corp., IBM and Control Data Corp.; midrange machines from AT&T, Data General Corp., Digital Equipment Corp., Hewlett-Packard Co. and Pyramid Technology Corp.; and microcomputers from Apple Computer Inc., Compaq Computer Corp. and IBM. Polosky is responsible for determining the architecture, standards, methodology and tools the company uses to develop software, as well as portfolio management. But he says the critical challenge lies in ferreting out what the business side of the company needs in the way of technology and then translating these needs into workable systems.

Polosky recently discussed his work and the work of his counterparts in other companies in an interview with DATAMATION. Here are some highlights from that conversation.

THE UNIQUE ASPECT of Polosky's job is that he really deals with translating business direction into a technology perspective.

Photograph by John Marriott

Q: You have a background in both technical and business operations at Pacific Bell. Is that typical of your counterparts in other businesses?

A: These people typically have been involved in strategic planning for a long period of time, usually with a network or a systems background. But in a lot of cases not both. At least in the telephone or communications business, these have been distinctly different disciplines. It's only been in recent years that we've begun to recognize how closely they need to come together. They would have been either experts in planning, or they would have come up in one of these

sure that we match the resources with the needs.

On a dotted line basis, we have people out within the development organization that operate what are called "strategic focus divisions." Using our integrated transition plan, they effectively manage these portfolios. One manages the billing component, another the customer interface, another the provisioning and so forth. They begin to break that plan down into more tactical steps. They begin to worry about how to do requirements, when to begin the design work, etc. We work very closely with these groups.

I have a very small organization, but we work with other organizations in the business. This includes the Integrated Task Force Group—an organization of all the primary planners, including myself, the marketing director, the director of technical training and my peer on the network side, who are managing the planning and implementation of the major components of technology.

Q: What's the business analyst's salary range?

A: I'm not sure the term *business analyst* is the one that I would use. I really believe it's more like strategic technology planning or business planning/technical planning, if you will. I think the salary varies depending on the function. If it's a person analyzing a component part of your overall plan, that's one thing. If it's the person orchestrating the entire plan—the characteristics that people in my position would have—it's another.

I have people doing analyst work who would be making $35,000 to $75,000 depending on the job's scope. People at the fifth level of management or at the assistant vice president level would be making substantially more than that, obviously.

Q: What's the future for business technology planners, as you call them?

A: Businesses that don't have these functions are going to have to bring some people in to do this kind of work. The ability to take your business needs and to translate that into what kind of technology infrastructure is needed to meet these needs is absolutely essential. People are going to have to be available who understand not only technology but also the business directions of organizations.

Q: What are the career paths of analysts or planners?

A: Given that they are well steeped in both technology and business planning, they could do several things. First, they could head one of the technical organizations in an organization. Second, they could probably provide good guidance in a marketing area. Third, they could be well positioned to lead the entire organization. Several other steps would be involved, so I don't want to imply that by doing [what we do] you're the next president of the company. But when you think about the characteristics we're talking about to do these kind of jobs . . . if you didn't aspire to eventually develop into a CEO or COO, you certainly would be in position to act in an advisory capacity to the key officers of the business.

Q: Do your counterparts share that view?

A: To be honest, I haven't discussed upward mobility much with my peers . . . because the focus is on the job at hand.

Q: Given a knowledge of the business direction and of the technology, what other skills are required to perform effectively as a business analyst?

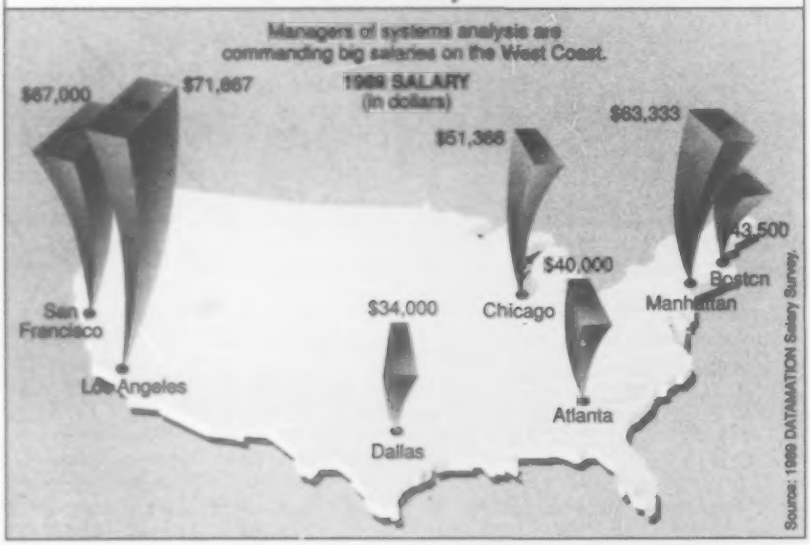
A: Very good listening skills. You're interacting with other components within the business, trying to understand their direction. You also need to have the ability to compromise. As you deal with overall business direction, there's always a series of constraints, whether financial or human capabilities. Your task is to deal with these and offer the best solution to support the company's business needs.

Q: Do you have any special relationships with vendors in order to keep ahead of technology innovations?

A: Yes. Each year, we visit with key systems and network vendors in order to share Pacific Bell's business directions, such as where we are going and what is our primary focus. Usually, the vendors will in turn share with us what their direction is, including future products. These discussions will enable us to determine such things as, Do we share a common architectural direction? Are they providing platforms that have the functionality that we want? and whether we can interoperate these platforms with those of other vendors.

Obviously, we do not want to team up with only one vendor. We want to operate in a multivendor environment. In addition to product offerings, you also have to stay attuned to changes in the industry. In our business, for example, that means keeping track of the evolution in the network and what's happening in the telecommunications business, such as changes in the regulation aspects of the business. You need to be cognizant of all those things that have an impact on your ability to do your job. ▭

What Business Analysts Are Worth



☐ We Visit With Key Vendors To Share Pacific Bell's Business Directions.